UNITED STATES PATENT AND TRADEMARK OFFICE

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EXAMINER
DUONG, CHRISTINE T

ART UNIT	PAPER NUMBER
2416	

NOTIFICATION DATE	DELIVERY MODE
02/05/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Docketing.US@motorola.com

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>03 September 2008</u>.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-7</u> is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-7</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
        1.☐ Certified copies of the priority documents have been received.
        2.☐ Certified copies of the priority documents have been received in Application No. _____.
        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   Applicant's request for reconsideration of the finality of the rejection of the last

Office action is persuasive and, therefore, the finality of that action is withdrawn.

This is in response to the Applicant's arguments and amendments filed on 03

September 2008 in which claims 1-7 are currently pending.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1, 7, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Tomcik et al. (US Patent 6,567,388 B1 hereafter Tomcik) in view of Matsumoto et al.

(US Patent No. 5,414,717 hereafter Matsumoto).

Regarding claim 1, Tomcik discloses a method of negative acknowledgment

(NAK) suppression.

The limitation, determining that a NAK needs to be transmitted over a channel ("a

frame is considered to have been received in error if an out of sequence frame is

detected, or if a frame is received, but the data contained in data field 76 is not usable"

column 8 lines 47-50).

The limitation, determining if data or other channel information currently needs to be transmitted over the channel ("control system 54 determines if any empty time slots are available" column 9 lines 18-19).

The limitation, transmitting the NAK if data and other channel information does not need to be transmitted over the channel, otherwise buffering the NAK ("NAKs relating to the same error frame are only inserted into the transmission stream if an empty time slot becomes available, that is, if no normal data frames are immediately present for placement into the transmission stream" column 9 lines 10-15).

However, Tomcik does not explicitly disclose buffering the NAK.

Nevertheless, Matsumoto discloses a NAK register (NAK register 14, fig. 1).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to buffer the NAK because "the NAK register 14 stores NAK data" (Matsumoto column 8 lines 22-23).

Regarding claim 7, Tomcik discloses an apparatus.

The limitation, the logic circuitry having a transmission status of a transmitter as an input and outputting instructions for a NAK generator to generate NAKs based on the transmission status of the transmitter ("NAKs relating to the same error frame are only inserted into the transmission stream if an empty time slot becomes available, that is, if no normal data frames are immediately present for placement into the transmission stream" column 9 lines 10-15).

However, Tomcik does not explicitly disclose the limitation, a buffer storing NAKs.

Nevertheless, Matsumoto discloses a NAK register (NAK register 14, fig. 1).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have a buffer storing NAKs because "the NAK register 14 stores NAK data" (Matsumoto column 8 lines 22-23).

Regarding claim 8, Tomcik, Matsumoto discloses everything claimed as applied above (see claim 7). In addition, Tomcik discloses the limitation, the transmission status of the transmitter comprises information on whether or not data or other channel information is currently awaiting transmission ("control system 54 determines if any empty time slots are available" column 9 lines 18-19).

4.   Claims 2, 3, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomcik, Matsumoto further in view of Galuszka et al. (US Patent No. 5519693 hereafter Galuszka).

Regarding claim 2, Tomcik, Matsumoto discloses everything claimed as applied above (see claim 1).

However, Tomcik, Matsumoto does not explicitly disclose determining if a predetermined number of messages have been buffered and transmitting if the predetermined number of messages have been buffered, otherwise buffering.

Nevertheless, Galuszka discloses "the transmit FIFO buffer can be operated to release data bytes of a frame to the framing component of the transmit framing path for transmission on the link only after a predetermined number of bytes are stored in the FIFO buffer" (Galuszka column 3 lines 14-17).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to determine if a predetermined number of messages have been buffered and transmit if the predetermined number of messages have been buffered, otherwise buffering because it will "provide an efficient and high speed line interface (Galuszka column 3 line 39).

Regarding claim 3, Tomcik, Matsumoto, Galuszka discloses everything claimed as applied above (see claim 2).

However, Tomcik, Matsumoto does not explicitly disclose an amount required to fill an over-the-air frame.

Nevertheless, Tomcik discloses a wireless system (Tomcik fig. 1) and Galuszka discloses "data bytes of a frame" (Galuszka column 3 line 15).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have an amount required to fill an over-the-air frame because of design choice in a wireless system.

Regarding claim 9, Tomcik, Matsumoto discloses everything claimed as applied above (see claim 7). However, Tomcik, Matsumoto does not explicitly disclose the logic circuitry additionally outputs instructions for the NAK generator to generate NAKs based on a number of NAKs stored in the buffer.

Nevertheless, Galuszka discloses "the transmit FIFO buffer can be operated to release data bytes of a frame to the framing component of the transmit framing path for transmission on the link only after a predetermined number of bytes are stored in the FIFO buffer" (Galuszka column 3 lines 14-17).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to determine if a predetermined number of messages have been buffered and transmit if the predetermined number of messages have been buffered, otherwise buffering because it will "provide an efficient and high speed line interface (Galuszka column 3 line 39).

5.   Claims 4-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tomcik, Galuszka further in view Matsumoto.

Regarding claim 4, Tomcik discloses a method.

The limitation, determining that a NAK needs to be transmitted over a channel ("a frame is considered to have been received in error if an out of sequence frame is detected, or if a frame is received, but the data contained in data field 76 is not usable" column 8 lines 47-50).

However, Tomcik does not explicitly disclose determining a number of messages currently buffered and transmitting the messages currently buffered along with the message if the predetermined number of messages have been buffered, otherwise buffering.

Nevertheless, Galuszka discloses "the transmit FIFO buffer can be operated to release data bytes of a frame to the framing component of the transmit framing path for transmission on the link only after a predetermined number of bytes are stored in the FIFO buffer" (Galuszka column 3 lines 14-17).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to determine a number of messages currently

buffered and transmit the messages currently buffered along with the message if the predetermined number of messages have been buffered, otherwise buffering because it will "provide an efficient and high speed line interface (Galuszka column 3 line 39).

In addition, Tomcik, Galuszka discloses everything claimed as applied above. However, Tomcik, Galuszka does not explicitly disclose buffering the NAK.

Nevertheless, Matsumoto discloses a NAK register (NAK register 14, fig. 1).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to buffer the NAK because "the NAK register 14 stores NAK data" (Matsumoto column 8 lines 22-23).

Regarding claim 5, Tomcik, Galuszka, Galuszka discloses everything claimed as applied above (see claim 4).

In addition, Tomcik discloses the limitation, determining if data or other channel information currently needs to be transmitted over the channel ("control system 54 determines if any empty time slots are available" column 9 lines 18-19).

The limitation, transmitting the NAK if data and other channel information does not need to be transmitted over the channel, otherwise buffering the NAK ("NAKs relating to the same error frame are only inserted into the transmission stream if an empty time slot becomes available, that is, if no normal data frames are immediately present for placement into the transmission stream" column 9 lines 10-15).

However, Tomcik does not explicitly disclose buffering the NAK.

Nevertheless, Matsumoto discloses a NAK register (NAK register 14, fig. 1).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to buffer the NAK because "the NAK register 14 stores NAK data" (Matsumoto column 8 lines 22-23).

Regarding claim 6, Tomcik, Galuszka, Matsumoto discloses everything claimed as applied above (see claim 4). However, Tomcik does not explicitly disclose transmitting the NAKs if the number of NAKs is equal to an amount of NAKs required to fill an over-the-air frame.

Nevertheless, Tomcik discloses a wireless system (Tomcik fig. 1) and Galuszka discloses "data bytes of a frame" (Galuszka column 3 line 15).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have an amount required to fill an over-the-air frame because of design choice in a wireless system.

Response to Arguments

6.   Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTINE DUONG whose telephone number is (571)270-1664. The examiner can normally be reached on Monday - Friday: 830 AM-6 PM EST with first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kevin C. Harper/
Primary Examiner, Art Unit 2416

/Christine Duong/
Examiner, Art Unit 2416
01/30/2009